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SUMMARY
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UNITED NATIONS CONFERENCE
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FOR THE BENEFIT OF THE LESS DEVELOPED AREAS

SUMMARY

Agenda Item: D.11.1. United Kingdom

THE TECHNICAL FACTORS WHICH DETERMINE THE CHOICE OF RAW MATERIAL, PROCESS PRODUCT (NITROGENOUS, PHOSPHATIC OR COMPOUND FERTILISER) AND LOCATION OF PLANT

By A. J. PAYNE
Ph.D., M.I. Chem. E.

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SUMMARY of Paper Entitled "The Technical Factors which Determine the Choice of Raw Material, Process Product (Nitrogenous, Phosphatic or Compound Fertiliser) and Location of Plant", by A. J. Payne, Ph.D., M.I.Chem.E.

Agenda Item D.11.1.

The paper directs attention to the importance of higher and more efficient food production and the corresponding need for chemical fertilisers.

Before discussing the various factors which influence the selection of a fertiliser for manufacture in any given location, a review of world fertiliser statistics is presented, and the change in utilisation of fertilisers having nitrogen, phosphorous and potash as base is shown graphically for the period 1954-1960. The reasons for the changes are briefly considered.

The paper stresses that agronomical considerations are most important in selecting fertiliser types; field trials are normally essential. The influence of climate on manufacture and use are considered.

The difficulty in arriving at realistic cost comparisons is demonstrated and the data which must be taken into account are indicated.

Production costs and their variation with size of plant are then considered, for phosphates and nitrogenous fertilisers.

Raw materials are discussed, including the change in the source of hydrogen for synthetic ammonia production. The increasing use of natural gas or petroleum products as a source of hydrogen and the type of process to be used for this are considered.

Sources of phosphate rock and the processes used for production of phosphate fertilisers are described and the economic background briefly considered.

The influence of raw material location, transport facilities, availability of water and electricity and other factors on the choice of site for a plant are indicated and the paper concludes by stressing the importance of a thorough investigation of all relevant data before any decision on plant, site or material is taken.

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